

REMARKS

The Present Invention and Pending Claims

Claims 3-9 are pending and are directed to a pressure-sensitive adhesive sheet.

Amendments to the Claims

Claim 9 is new and supported by the specification at, for example, page 7, lines 1-9; page 12, line 32, through page 13, line 2; and page 15, lines 13-18. Accordingly, no new matter has been added by way of the addition of claim 9.

Summary of the Office Action

The Office has rejected claims 3-8 under Section 103(a) for alleged obviousness in view of U.S. Patent 5,741,861 (Yamamoto et al.), International Patent Application WO 99/65957 (Egashira et al.), and U.S. Patent 6,218,006 (Tokunaga et al.). Claim 3 has been rejected under Section 103(a) as allegedly obvious in view of U.S. Patent 5,948,517 (Adamko et al.) and Wild et al., *J. Polym. Sci.: Polym. Phys. Ed.*, 20, 441-455 (1982). The Office also rejects claims 4-8 under Section 103(a) as allegedly obvious in view of the combination of Adamko et al., Wild et al., and Tokunaga et al. Reconsideration of these rejections is hereby requested.

Discussion of the Rejections under Section 103(a)

The Office has rejected the pending claims for allegedly defining obvious subject matter in view of several references. These rejections are traversed for the following reasons.

A. The Yamamoto, Egashira, and Tokunaga references (applied to claims 3-8)

The Office contends that Yamamoto et al. teaches all of the elements of the claimed invention, except (i) the use of the laminate sheet as a release liner and (ii) an adhesive substrate in contact with the release sheet comprising a polyester or polyacrylate adhesive. The Office contends that it would have been obvious to combine the disclosures of Yamamoto et al. with the disclosures of the Egashira et al. and Tokunaga et al. to arrive at the present invention.

Specifically, the Office contends that it would have been obvious to use the laminate sheet of Yamamoto et al. as a release sheet for an adhesive substrate as described in Egashira et al. Egashira et al. describes a release member of an adhesive sheet; however, the release member of Egashira et al. has a layer formed from an ethylene copolymer and a release agent layer (see, e.g., column 20, lines 6-12, of Egashira et al.). In other words, in Egashira et al.,

the layer formed from the ethylene copolymer is in contact with the adhesive layer via a release agent layer and does not directly contact the adhesive layer. Therefore, the present invention, wherein an adhesive layer is in contact with a sheet material comprising a linear ethylene resin as a main component, would not have been obvious to one skilled in the art from the disclosure of Egashira et al., or the combination of the disclosures of Yamamoto et al. and Egahira et al.

Additionally, the Office contends that it would have been obvious to one skilled in the art to modify the disclosure of Yamamoto et al. to include a polyester adhesive and a polyacrylate adhesive in contacting relation to the silicone-free laminate as described in Tokunaga et al. Yamamoto et al. does not disclose an adhesive substrate in contact with the release sheet as recited in the pending claims, since the resin composition for the laminates of Yamamoto et al. is subjected to heat sealing (see, e.g., column 1, lines 9-12; and column 2, lines 12-19, of Yamamoto et al.). In other words, when a heat sealing is applied, no adhesive is necessary. Therefore, there is no motivation to combine the resin composition for the laminates of Yamamoto et al. and the adhesive described in Tokunaga et al., since Yamamoto et al. teaches a different manner of adhering the resin composition for laminates.

Thus, since the cited references, alone or in combination, do not teach or suggest a pressure-sensitive adhesive sheet comprising a release sheet with the properties recited in the pending claims, and/or since there is no motivation to combine the cited references in such a way as to arrive at the present invention, the pending claims cannot be considered to define obvious subject matter in view of the cited references.

B. The Adamko and Wild references (applied to claim 3)

The Office contends that Adamko et al. does not clearly indicate the amount of eluted component (by TREF) of a resin, but that a resin having the amount of eluted component (by TREF) specified in the pending claims can be obtained by controlling the density of crystallinity as described in Wild et al. Applicants respectfully disagree with this assertion.

In Adamko et al., the mere control of density or crystallinity of a resin is insufficient. Adamko et al. places an emphasis on the realization of “uniform comonomer distribution,” “narrow molecular weight distribution,” and “uniform compositional distribution” (see, e.g., column 3, lines 58-59, and column 4, lines 10-12 and 18-20, of Adamko et al.). A uniform compositional distribution signifies a sharp elution curve (by TREF) (amount of eluted component vs. temperature). Adamko et al. teaches that the use of metallocene catalysts are preferable (see, e.g., column 2, lines 28-30, and column 4, lines 10-12, of Adamko et al.). Since a resin obtained using a metallocene catalyst has a highly uniform compositional

distribution, an elution curve (by TREF) with a noticeably sharp peak should be obtained. Therefore, if a resin has an elution curve (by TREF) with a peak appearing at a temperature higher than 30°C, an amount of eluted component (by TREF) of such resin at a temperature not higher than 30°C becomes extremely small (near 0) and lower than the lower limit specified by the pending claims. In contrast, when the above-mentioned curve has a peak at a temperature not higher than 30°C, the amount of eluted component (by TREF) of such resin at not higher than 30°C becomes quite large and exceeds the upper limit specified in the pending claims.

The present invention is predicated on the finding that a polyethylene resin, which is not excessively uniform and which has a certain variance of compositional distribution, is particularly superior as a silicone-free release sheet. A direct expression of variance in the compositional distribution of a polyethylene resin is difficult; as such, a parameter of the amount of eluted component (by TREF) of a resin at not higher than 30°C is recited in the pending claims. The pending claims do not recite a resin that would be readily considered from the disclosure of Adamko et al. Indeed, Adamko et al. does not even describe the parameter of the amount of eluted component (by TREF) of a resin at not higher than 30°C. More importantly, the present invention cannot be considered as obvious in view of Adamko et al., since the technical guiding principles of the present invention and Adamko et al. are completely different (almost opposite). Adamko et al. teaches that the compositional distribution of a resin should be narrowed, while the present invention is based on expanding the compositional distribution of a resin to a certain extent. Accordingly, one ordinarily skilled in the art would not be motivated to combine the disclosure of Adamko et al. with the disclosure of Wild et al., and even if the cited references were combined, the present invention would not be realized.

Thus, because the cited references, alone or in combination, do not teach or suggest a pressure-sensitive adhesion sheet comprising a release sheet with the properties recited in the pending claims, the pending claims cannot be considered to define obvious subject matter in view of the cited references.

C. The Adamko, Wild, and Tokunaga references (applied to claims 4-8)

As described above, the combination of the Adamko and Wild disclosures does not lead to the present invention. The additional use of the disclosure of Tokunaga et al. does not remedy the deficiencies of the disclosures of the other cited references.

Tokunaga et al. indicates that a silicone-free release liner made up of a polyethylene film, a polypropylene film, etc., can be used; however, Tokunaga et al. does not teach or

suggest the importance of the releasability of a release liner, or modification of a sheet material to improve releasability. Accordingly, there would have been no motivation for one skilled in the art to combine the disclosure of Tokunaga et al. with that of Adamko et al. and/or Wild et al. to arrive at the present invention. Furthermore, even if the disclosures of the cited references were combined, the present invention defined by the pending claims would not necessarily have resulted. As discussed above, the pending claims recite a resin that would not be readily considered from the disclosure of Adamko et al., especially since Adamko et al. does not describe the parameter of the amount of eluted component (by TREF) of a resin at not higher than 30°C.

Thus, because the cited references, alone or in combination, do not teach or suggest a pressure-sensitive adhesion sheet comprising a release sheet with the properties recited in the pending claims, the pending claims cannot be considered to define obvious subject matter in view of the cited references.

For the foregoing reasons, the obviousness rejections of the pending claims are believed to be improper, and should be withdrawn.

Conclusion

The application is considered in good and proper form for allowance, and the Examiner is respectfully requested to pass this application to issue. If, in the opinion of the Examiner, a telephone conference would expedite the prosecution of the subject application, the Examiner is invited to call the undersigned attorney.

Respectfully submitted,



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